

Innovative Solid State Lighting Replacements for Industrial and Test Facility Locations, Phase I

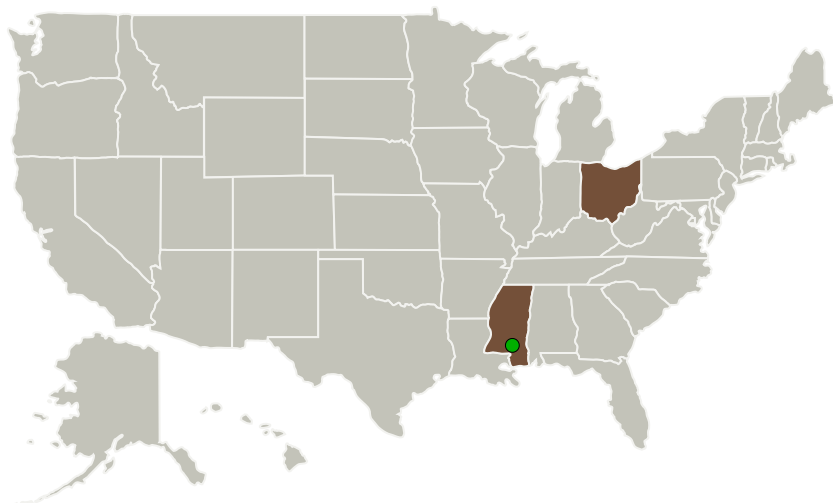
Completed Technology Project (2010 - 2011)



Project Introduction

The proposed innovation is the replacement of existing test stand and parking lot fixtures with current SSL LED technology. The replacement fixtures will reduce energy consumption, generate less heat and provide maintenance free operation for over 50,000 hours. An explosion-proof fixture is capable of containing an internal combustion event without allowing flames or hot gasses to escape to the surrounding environment. The lighting fixture defined is an explosion-proof fixture for use in hazardous hydrogen/oxygen atmospheres. Current fixtures contain a 110 Watt reflectored incandescent lamp. SSL sources are remarkably efficient compared to incandescent sources. The 110 Watt lamp in existing explosion-proof fixtures will be replaced by an SSL fixture requiring only around 29 Watts for the equivalent lighting output. The proposed Energy Focus solution will be an efficient, solid-state, explosion-proof fixture for use in hydrogen/oxygen atmospheres which is compatible with current systems and provides the required lighting distribution. It will do this through advanced thermal and electrical power management to ensure long fixture life

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
Energy Focus, Inc.	Lead Organization	Industry	Solon, Ohio
Lighting Innovations Institute	Supporting Organization	Academia	University Heights, Ohio
● Stennis Space Center(SSC)	Supporting Organization	NASA Center	Stennis Space Center, Mississippi

Primary U.S. Work Locations

Mississippi	Ohio
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Project Transitions

**January 2010:** Project Start**January 2011:** Closed out**Closeout Documentation:**

- Final Summary Chart(<https://techport.nasa.gov/file/140131>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Energy Focus, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Roger Buelow

Co-Investigator:

Roger Buelow

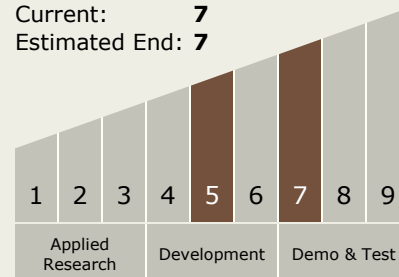
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Technology Maturity (TRL)

Start: 5
Current: 7
Estimated End: 7



Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
 - └ TX06.1 Environmental Control & Life Support Systems (ECLSS) and Habitation Systems
 - └ TX06.1.4 Habitation Systems

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System